



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,429	09/02/2004	Tsutomu Furuzono	1035-526	1242
23117	7590	12/07/2007	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			12/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/506,429	Applicant(s) FURUZONO ET AL.	
	Examiner Kuo-Liang Peng	Art Unit 1796	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 29 August 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

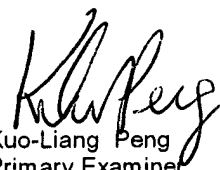
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.


Kuo-Liang Peng
Primary Examiner
Art Unit: 1796

Continuation of 11. does NOT place the application in condition for allowance because:

1. Rejection of Claims 9, 11, 13-17 and 19-20 under 35 USC 102(b) as being anticipated by JP511 (JP 2001-172511) as evidenced by Sato (US 4 276 135) is maintained because the rejection is adequately set forth in paragraph 3 of Paper No. 090107. Applicant's arguments have been fully considered but they are not persuasive. The focus argument related to the core patentability is discussed below.

For Applicants' argument (Remarks, under the subtitle "Claims 9 and 11" starting from page 7), Examiner disagrees because of the following reason: First, Examiner's position recited in Paper No. 090107 is incorporated herein by reference. Second, Figures 1 and 2 are misleading because the claims are not necessarily directed to coatings. Third, Figure 1 in the remarks is misleading in that there should have been linkages between Si atoms and the polymer (depicted as a wagging line). In addition, Figure 2 in the remarks, between HAp (hydroxyapatite) and the polymer (depicted as a wagging line), the linkage should be -O-Si-(CH₂)₃-NH-CO-, rather than simply as -NH-CO-. According to Applicants' specification (page 15, last paragraph to page 16, 1st paragraph), alkoxysilyl groups on the polymer can be introduced by modifying the polymer with coupling agents such as aminopropyltri(m)ethoxysilane, etc. Notably, the aminopropyltri(m)ethoxysilane is also used in JP511 to modify the hydroxyapatite complex. As such, upon reacting the modified polymer with the hydroxyapatite complex, there will be linkages, as residues from the coupling agent, between Si atoms and the polymer. As such, JP511's linkages between the polymer and hydroxyapatite complex read on those of claimed invention. In summary, as mentioned in the previous Office action, the instant claims are product-by-process claims. JP511's product is obtained by first modifying the hydroxyapatite complex with a coupling agent, followed by reacting the modified hydroxyapatite complex with the polymer; while Applicants' product is prepared by first modifying the polymer with a coupling agent, subsequently reacting the modified polymer with the hydroxyapatite. However, the two processes result in the same product.

For Applicants' argument (Remarks, under the subtitle "Claims 19 and 20" starting from page 8), Examiner disagrees because of the following reasons: First, Examiner's position recited in Paper No. 090107 is incorporated herein by reference. Second, Figures 3 and 4 are misleading because the claims are not necessarily directed to coatings. Third, Applicants are reminded that the claim languages do not exclude the possibility of R-Si(-O-)₃ on the surface of hydroxyapatite complex. At least for this reason, Applicants' argument is moot. Fourth, Applicants appear to imply that in JP511, the bioactive groups on the hydroxyapatite complex have completely consumed by the silane coupling agent. However, the bioactivity is not claimed. Also, there is no such evidence of lack of bioactivity. Especially, JP511 is in the same field as that of Applicants' endeavor, and both products should possess similar bioactivity. Therefore, JP511's hydroxyapatite complex losing bioactivity due to the process it is subjected to is merely an opinion not evidence. Court held that the arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965) In addition, the claim languages do not exclude the possibility of the total amount of the reactive functional groups on Applicants' modified polymers being equal to or in excess of that of the bioactive groups on the hydroxyapatite complex, thereby all bioactive groups on the surface of the hydroxyapatite complex can be completely reacted with the reactive functional groups on the modified polymers. As such, Applicants' product will lose bioactivity, too.

2. Rejection of Claims 9, 11 and 19-20 under 35 USC 102(b) as being anticipated by Hino (US 5 814 681) and rejection of Claims 13-17 under 35 USC 103(a) as being unpatentable over Hino are maintained because the rejections are adequately set forth in paragraph 4 of Paper No. 090107. Applicant's arguments have been fully considered but they are not persuasive. The focus argument related to the core patentability is discussed below.

For Applicants' argument (Remarks, under the subtitle "Claims 9, 11, 19 and 20" starting from page 10 and "Claims 13 through 17" starting from page 11), Examiner disagrees because of the following reasons: Figure 4 in the remarks is not applicable here because all the functional groups on the hydroxyapatite complex derived from g-methacryloxypropyl trimethoxysilane are reacted and "bonded" to the polymer via the in-situ polymerization. Therefore, there are no free R-Si(-O-)₃ groups left. Thus, whether the whole hydroxyapatite powder is coated or not appears to be irrelevant.

For Applicants' argument (Remarks, page 11, 2nd paragraph to page 12, 2nd paragraph), as discussed above, the prior art does disclose a hydroxyapatite complex chemically bonded in the claimed fashion.

3. Applicants are advised that the "structure" in Claims 19 and 20 are missing.

4. Claims 1-8 and 18 are allowed.